AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes as follows:

Figure 1 is modified to distinguish the labels from the shaded surfaces upon which they are placed, as requested by the Office Action.

Figure 3 is modified to add reference numbers 302A and 302B, as requested by the Office Action.

Attachment: Replacement sheets

REMARKS

I. INTRODUCTION

Claims 1-30 were pending in the application at the time the Office Action was mailed. No claims are amended or canceled by this response. Accordingly, claims 1-30 remain pending.

II. EXAMINER INTERVIEW

Applicants' representatives thank Examiner Bashore for the telephonic interview conducted on February 21, 2007, in which the parties discussed the prior Examiner's objections to the drawings, rejections of the pending claims, the applied references, and the status of the application. Additional details are provided below. Should the Examiner need further information relating to the telephonic interview, he is asked to contact the undersigned.

III. DRAWINGS

The Office Action objects to the drawings. A response to the objections is set forth below:

(A) The Office Action indicates that lead lines are required for each reference character except for those that indicate the surface or cross section on which they are placed. Applicants respectfully request that the Examiner withdraw this objection, as the reference characters are clear as to the items to which they correspond.

(B) The Office Action indicates that reference numbers are necessary and points to 35 U.S.C. § 113. That statute requires applicants to "furnish a drawing where necessary for understanding of the subject matter sought to be patented." (35 U.S.C. § 113.) There is nothing in that statute requiring reference numbers. Applicants believe that one skilled

in the art would understand Figures 3, 7B, 7C, 7D, 15, 16, 17, and 18 without additional reference numbers.

(C) The Office Action indicates that numbers, letters and reference characters should not be placed upon shaded surfaces. Applicants have amended Figure 1 to distinguish the labels from the shaded surfaces upon which they are placed.

(D) The Office Action indicates that two items in Figure 3 are labeled with reference numbers 302 and that they should be numbered differently. Applicants have amended Figure 3 to label the two items with reference numbers 302A and 302B, respectively.

(E) The Office Action indicates that parts of Figure 4 appear to be an expanded view of parts of Figure 3 but that the relationship is unclear. Figure 4 illustrates a logical view of some components of Figure 3. The relationships can be drawn using the markings "client," "server," and "network."

(F) The Office Action indicates that identical items in Figures 3 and 4 should have the same reference numbers. As described above in paragraph (e), Figure 4 illustrates a logical view of some components of Figure 3. Accordingly, the same reference numbers are not required because the items are not necessarily identical.

(G) The Office Action indicates that the relationship of items 418, 420, and 422 of Figure 4 are not illustrated to the rest of Figure 4. These items, as described in the specification, represent messages that flow between the client and server via the network. One skilled in the art would understand that the messages, though sent or received by the depicted logical components, are unassociated with the components in that they travel via the network and are logically unattached to the components.

(H) The Office Action indicates that Figure 7A is an "exploded view" of item 1014 of Figure 10A. One skilled in the art would recognize that whereas Figure 7A illustrates the

logical flow of a routine, item 1014 invokes the routine. Applicants respectfully submit that no correction is required.

(I) The Office Action indicates that Figure 8 appears to be a "partial exploded view" of item 422 of Figure 4. That is incorrect. Item 422 of Figure 4 is a message. Figure 8 is a routine. One skilled in the art would recognize that a message is not a routine.

(J) The Office Action indicates that the decision flow illustrated in Figure 9 appears to be in error. In applicants' response to the Office Action of January 25, 2006, the applicants amended Figure 9. The decision flow is correctly identified, and is described at paragraph [00123] of applicants' specification.

(K) The Office Action indicates that items 1014 and 1016 of Figure 10A are "condensations" of full or partial views disclosed in Figures 7A and 10B respectively. One skilled in the art would recognize that items 1014 and 1016 indicate that routines are invoked and that Figures 7A and 10B are the invoked routines. Applicants respectfully submit that no correction is required.

(L) The Office Action indicates that item 1413 does not appear in the disclosure. Item 1413 has been added to the disclosure.

(M) The Office Action indicates that Figures 16-18 are unclear. Applicants assert that one skilled in the art would understand these execution patterns. Should the Examiner need assistance in interpreting these figures, he is urged to contact the undersigned.

(N) The Office Action indicates that Figures 1, 5, 6, 9, and 11 should be designated as Prior Art. Applicants respectfully assert that none of these Figures is Prior Art.

(O) The following summarizes the amendments made to the drawings. Figure 1 has been amended to distinguish the labels from the shaded surfaces upon which they are placed. Figure 3 has been amended to label the two items with reference numbers 302A and 302B, respectively.

IV. SPECIFICATION

(A) The Office Action indicates that applicants are required to update the status of all parent priority applications in the first line of the specification. In applicants' response to the Office Action of January 25, 2006 ("previous Office Action"), applicants amended the specification to update the status of all related applications in the first paragraph of the specification. Accordingly, applicants respectfully request the Examiner to withdraw this objection.

(B) The Office Action indicates that the logic in the decision tree disclosed in paragraphs [00123]-[00125] and Figure 9 appears to be in error. Applicants amended Figure 9 in the response to the previous Office Action, and the logic in the decision tree is correct. Accordingly, applicants respectfully request that the Examiner withdraw this objection.

(C) The Office Action indicates that elements are discussed in the disclosure without citation to reference numbers, where those same elements are identified in the drawings by reference number. Applicants respectfully submit that no correction is required when it is clear to which portion of the Figures the disclosure refers.

V. CLAIMS

The Office Action rejects claims 1-30 under 35 U.S.C. § 103(a) over Iverson, Lee, "NODAL: A Filesystem for Ubiquitous Collaboration" ("NODAL") in view of Armstrong, Eric, "[unrev-II] Meeting Summary: 4 May 2000" (called "Iverson" in the Office Action). Applicants respectfully traverse these rejections.

NODAL describes a "general, document-oriented distributed database and filesystem with a data model that allows addressing, searching and linking of content of any kind from any document. ... Moreover, it is built on a distributed client-server (or peer-to-peer) communication model that seamlessly shifts from synchronous, real-time interaction to asynchronous or intermittently-connected interaction." (NODAL, Abstract.) Iverson summarizes a meeting in which Lee Iverson described a distributed document object model ("DDOM").

Applicants' technology is generally directed to enabling collaborative authoring of hierarchical documents in a distributed computing system. In some embodiments, the system receives a registration request from a business logic event handler, registers the business logic event handler, and performs functions relating to indications from the business logic event handler. Business logic generally refers to business rules that express business policy and a business logic event handler encapsulates business rules and handles events. The specification gives an example of a business logic event handler: "the business logic component may monitor a financial database and cause mutations to occur to a document based on changes in the database." (Paragraph [0073].) In this example the business logic event handler is the business logic component that causes mutations based on changes in a financial database.

The pending independent claims each recite a business logic event handler. For example, claim 1 recites "receiving a registration request from a business logic event handler for an event of the distributed document object model." Neither NODAL nor Iverson disclose or suggest a business logic event handler. Applicants' specification states that "under asychronous invocation mode, a client-side business logic component may not need to wait for the DDOM client to receive a response from the server before the routine returns." (Paragraph [0133].) A business logic event handler thus may have an asynchronous invocation mode. According to the Office Action, NODAL teaches an asynchronous update routine. (Office Action, p. 10.) NODAL actually describes a request-update style of protocol, which allows a client to send a request to a server, receive an

immediate acknowledgement, and then later receive a response from the server once the server has processed the request. (See NODAL, p. 27). Applicants respectfully disagree that NODAL's request-update style of protocol discloses or suggests the asynchronous invocation mode of a business logic event handler. Even if NODAL describes an update routine that operates asynchronously, it does not follow that NODAL discloses or suggests a business logic event handler.

According to the Office Action, NODAL's "cursor" interface is equivalent to applicants' business logic event handler. (Office Action, pp. 10-11.) The Office Action is incorrect. NODAL describes that a cursor represents the entire context of a reference to a particular node in a repository. (NODAL, p. 20.) Furthermore, a program accesses the data mutation interfaces via the cursor interface and not via the node. (Id.) A cursor provides a context description for evaluating permissions and maintaining an audit trail ("pedigree"). (Id.) A pedigree is defined as "the complete history of a document, including a full description of who did what, when and where." (Id.) NODAL's cursor is thus an intermediary object that enables a program to access nodes. NODAL's cursor enables permissions to be evaluated to see if a user or program is authorized to access a node and a pedigree to maintain a history of operations on a node. NODAL's cursor thus does not encapsulate business rules and handle events, and so is not a business logic event handler. NODAL thus does not disclose or suggest a business logic event handler. Iverson also fails to disclose or suggest a business logic event handler. Independent claim 16 also recites "business logic event handler." Accordingly, each of the pending independent claims is patentable over NODAL and Iverson, either alone or in combination.

VI. CONCLUSION

The independent claims each recite a novel combination of elements that is neither taught nor suggested by NODAL or Iverson and so cannot be rejected under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a). Because the dependent claims import the limitations from

the claims on which they depend, they also cannot be rejected under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a).

In view of the foregoing, applicant believes the pending application is in condition for allowance.

Please charge any deficiencies or credit any overpayment to our Deposit Account No. 50-0665, under Order No. 612188007US from which the undersigned is authorized to draw.

Dated: March 19, 2007

Respectfully submitted,

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Attachments

APPENDIX